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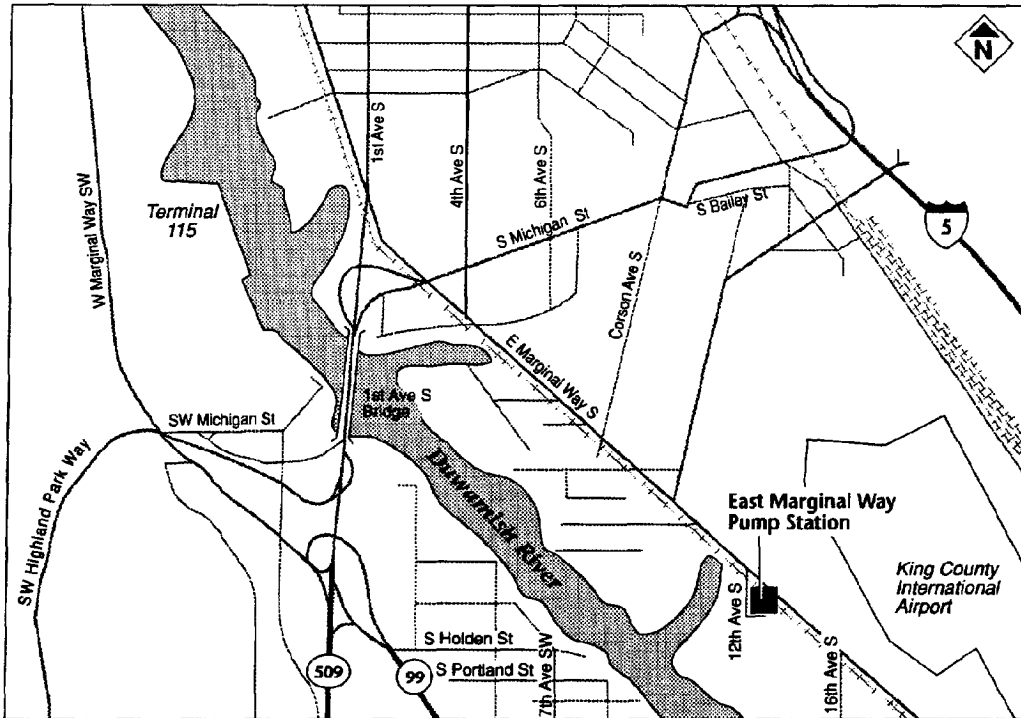
Revision B
April 1993

**OFFSITE FACILITIES AND
MISCELLANEOUS STRUCTURES MANUAL
VOLUME 2, WEST DIVISION**

Municipality of Metropolitan Seattle
Water Pollution Control Department
821 Second Avenue
Seattle, Washington 98104-1598

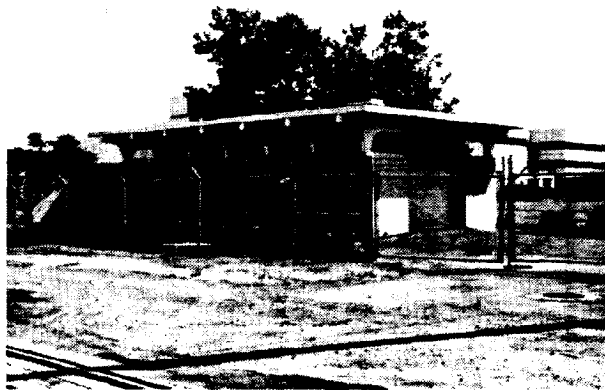
EAST MARGINAL WAY PUMP STATION

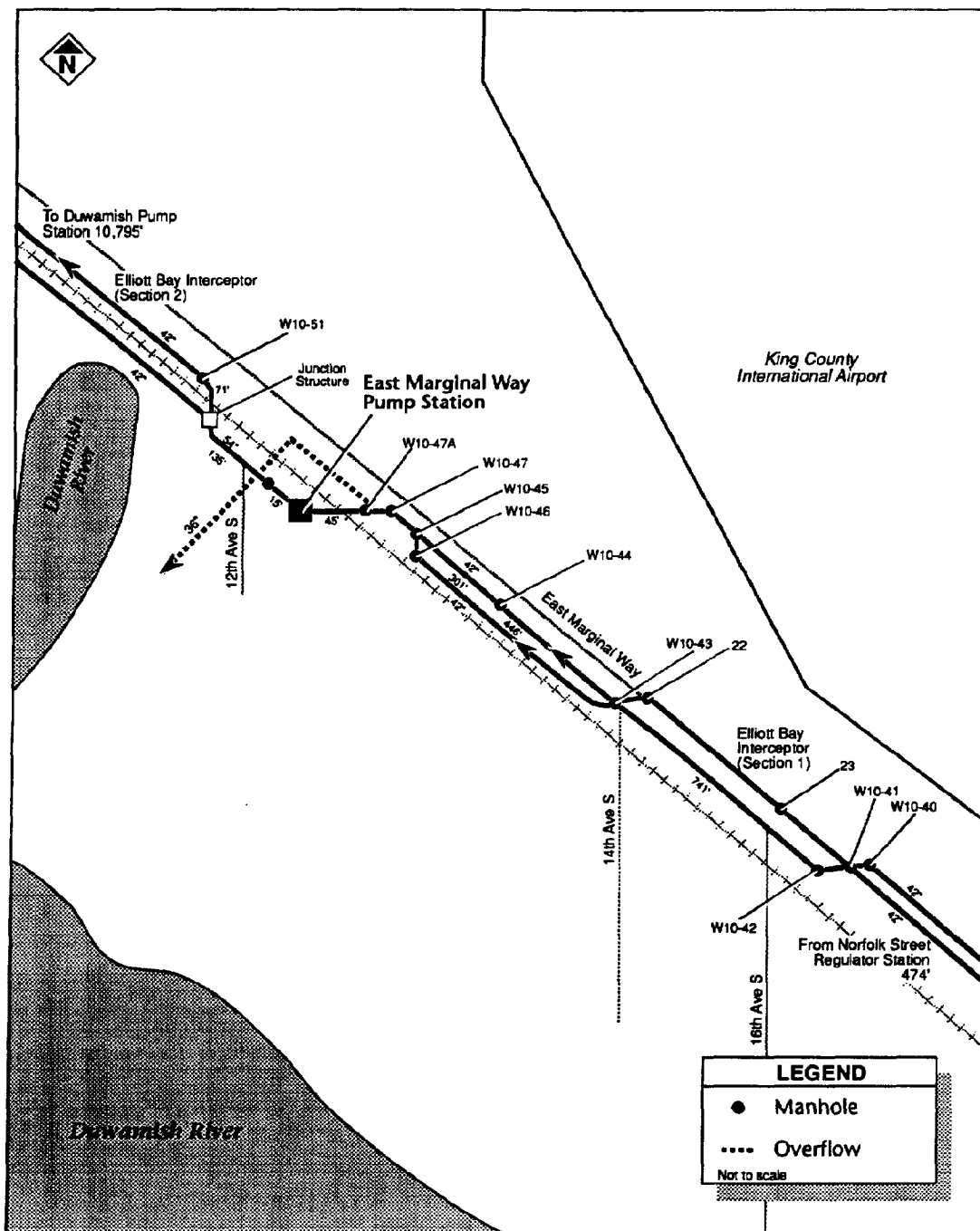
7319 E Marginal Way S, Seattle



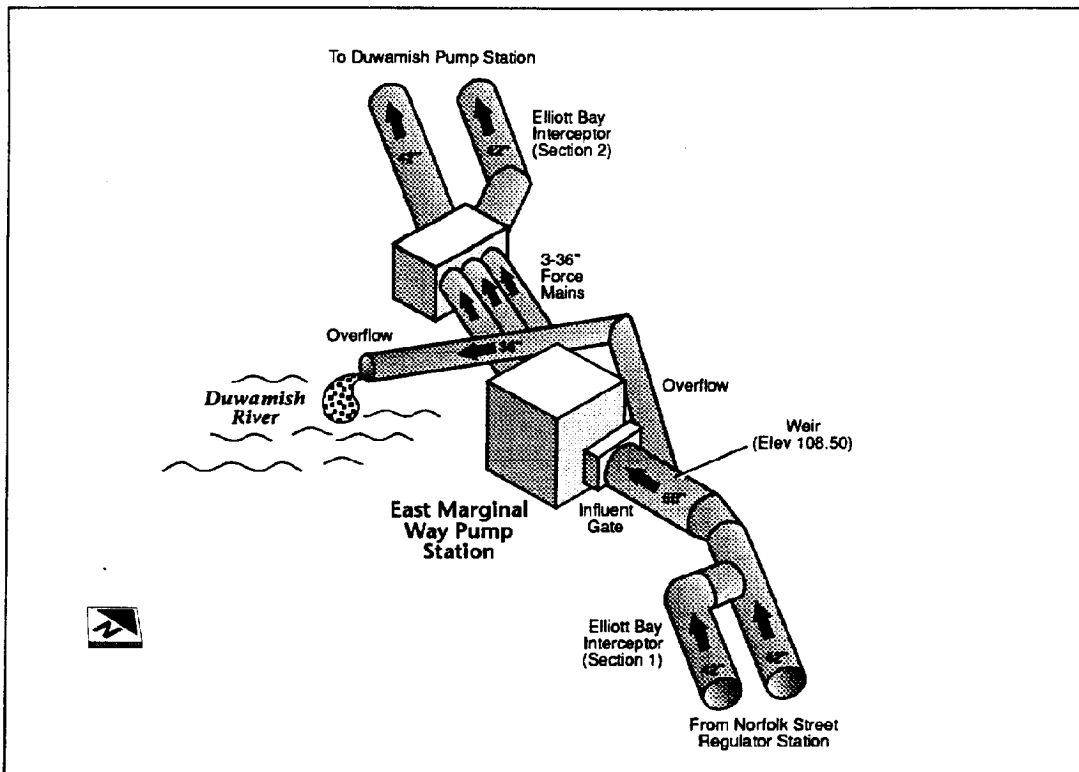
Directions

The station is located on the west side of E Marginal Way S just north of 16th Avenue S. A Boeing sign is located across from the station on the east side of E Marginal Way S.





One-Line Drawing



Flow Schematic

System Relationship

The station serves a 4,000-acre area, which includes the Boeing industrial complex. Wastewater flows from the east through the Henderson Street Trunk and the Norfolk Street Regulator Station. Wastewater is pumped through the station into the 54-inch-diameter Elliott Bay Interceptor and flows to the Duwamish Pump Station.

Flow Information (mgd)

	1980	2000
Average Dry Weather:	10.3	11.1
Average Wet Weather:	13.3	14.1
Peak (not including Seattle stormwater inflow):	27.6	30.0
Firm Pumping Capacity:	42.0	42.0

Critical Information

Emergency Power: Receptacle for generator

WARNING

Storage times represent the time allowed from shutdown to overflow under normal dry weather conditions. Storage times depend directly on weather conditions and condition of the pipes, and times must be adjusted accordingly.

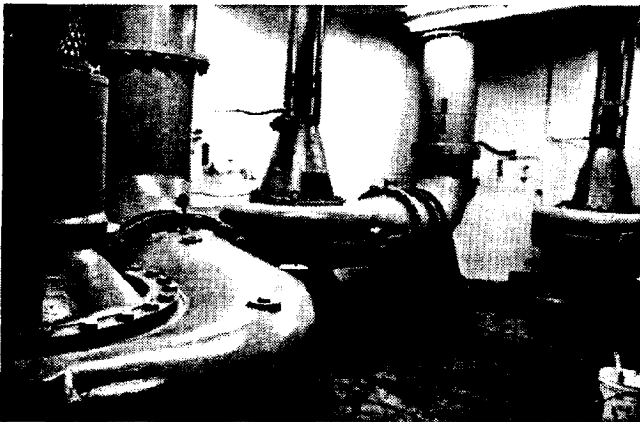
Storage Time:	1 to 1-1/2 hours
Overflow Elevation:	108.50 feet
Overflow Location:	Duwamish Waterway; through a 36-inch- diameter overflow line about 300 feet west of the station
Wet Well Grating Elevation:	100.50 feet



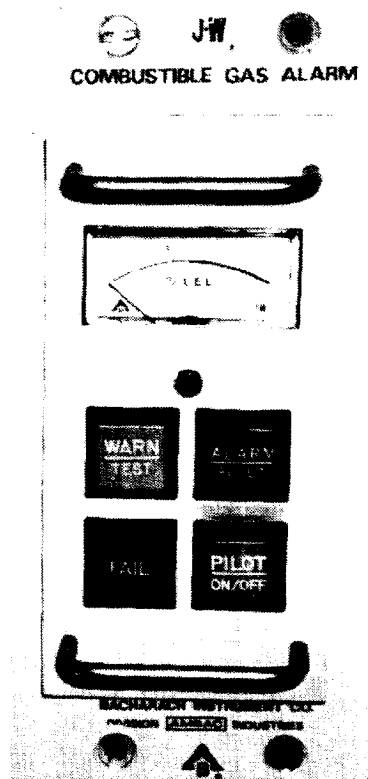
Control Room (Control Panel, Instrument Air and Service Air)



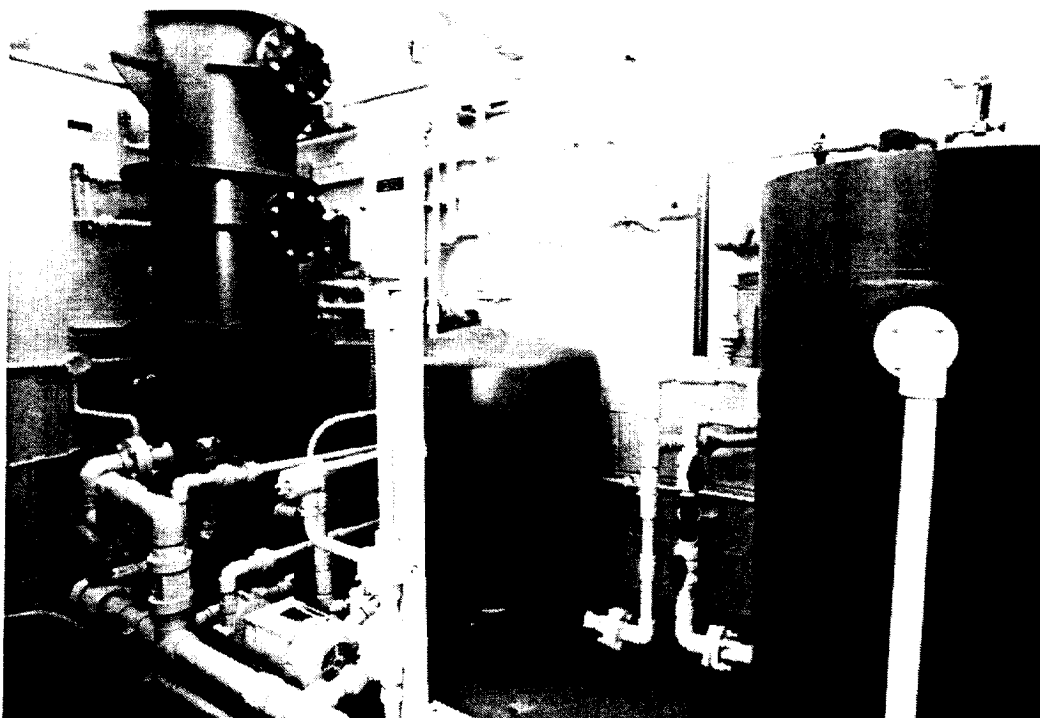
Motor Room (Motors, 24-inch-diameter Force Main Discharges)



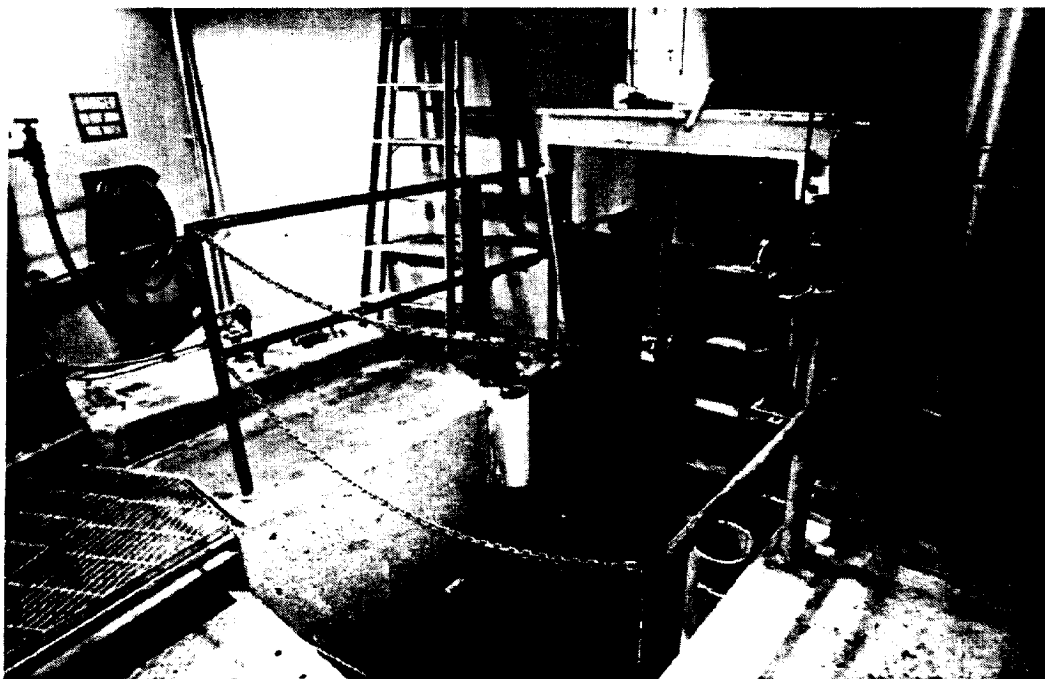
Pump Room



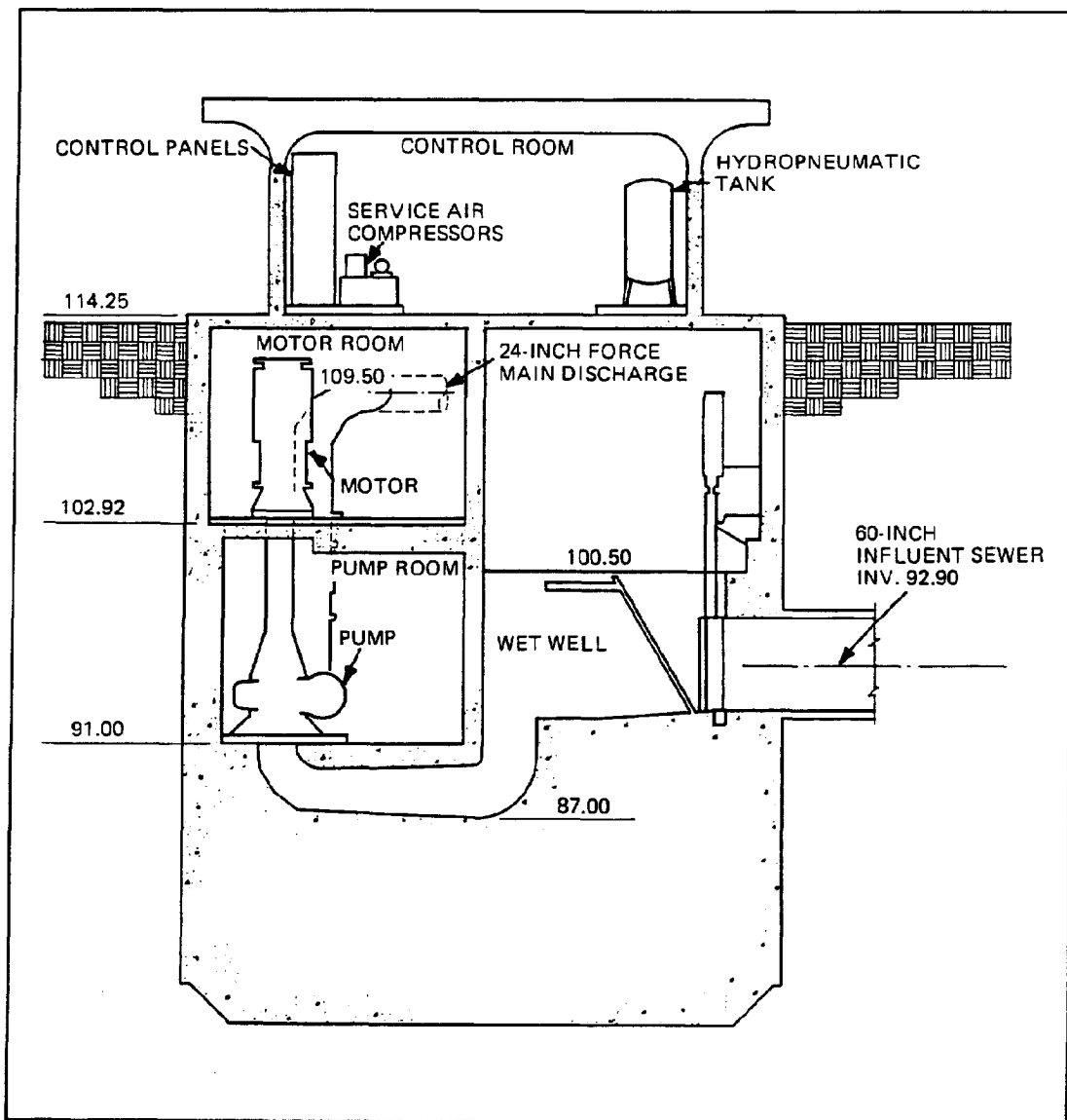
Explosive-Gas Monitor for Wet Well



Odor Control System



Wet Well (Influent Sewer Gate)



Station Cross Section

Construction Information		
Contract	Date Complete	Cost
62-8: Built pump station; Austin Construction Co.	1/64	\$192,080
M3-74: Added third pump, increased capacity; Venture Construction	1/77	\$326,153

Equipment Information	
Components	Characteristics
Gate System	
Influent Gate	Armco, model 55-20; 42 in x 60 in; cast iron
Operator	Hydro-Line, model R2G; C2 water operated; operating water pressure: 150 psi; stroke: 60 in
Hand Pump	Wm. S. Pine Inc., series 2000, emergency gate operator; cat. no. 2000-12; C2 water operated; piston diameter: 1.5 in
Raw Sewage Pump System (3 Units)	
Pumping Unit 1	
Pump	Worthington, model 24NCMZ1; capacity: 6,960 gpm at 16.4 ft TDH; suction: 24 in; discharge: 24 in; impeller size: ____ ; s/n 1597736
Motor	General Electric, model 5K6325XC253A, type K, frame 6325P30; rating: 100 hp, 500 rpm, 460 V, 147 A, 3-phase; s/n ELJ528021
Electric Clutch	Electric Machinery, frame MBS20; rating: 92 hp, 190 V maximum; s/n 176095584
Pumping Unit 2	
Pump	Same as No. 1, except s/n 1597735
Motor	Same as No. 1, except s/n ELJ528020
Electric Clutch	Same as No. 1, except s/n 274212131
Pumping Unit 3	
Pump	Worthington, model 24MNZ; capacity: 16,000 gpm at 125 ft TDH; suction: 24 in; discharge: 25 in; impeller size: ____ in; s/n 74-2001089-1
Motor	Same as No. 1, except s/n ELJ528022
Electric Clutch	Same as No. 1, except s/n 374212131

Equipment Information (continued)	
Components	Characteristics
Electrical Systems	
Utility Power	Seattle City Light
Control Battery Charger	Ratelco, model 2111K, type VR24122; output: 12 A, 24 Vdc
Batteries	Nife, model MDP-7, ni-cad; eighteen 1.42 V batteries connected in series
UPS	_____
Water Systems	
C1 Water	
Water Service	1-in incoming service; meter located in garden inside fence, 1 ft south of lettering on station
Backflow Preventer	Hersey-Beeco, model 6C; 1.5 in; s/n 1708
Sprinkler Timer	Telsco Weathermatic, model EM7-24; s/n 305049
C2 Water	
C2 Water Pumps (2)	Roth, model A256BF, turbine pumps; capacity: 20 gpm at 175 ft TDH; (1) s/n 132921, (2) s/n 145271
Motors (2)	Wagner, model 184-66481-00, type RPI, frame 184; No. ABD3V; rating: 2 hp, 1,750 rpm, 208/220/440 V, 6.2/3.1 A, 3-phase; (1) ID no. ABD3V, (2) ID no. AAL3S
Compressed Air Systems	
Service Air	
No. 1 Compressor	Ingersoll-Rand, model 222C4, type 30; rating: 110-130 psi; size 2.5 x 2.5 x 2.75; s/n 200329
Motor	General Electric, model 5K184AG201, frame 184; rating: 1.5 hp, 1,730 rpm, 220/440 V, 5.0/2.5 A, 3-phase
No. 2 Compressor	Same as No. 1, except s/n 205469
Motor	Westinghouse, model ABDP, frame 184; rating: 1.5 hp, 1,735 rpm, 220/440 V, 4.6/2.3 A, 3-phase
Instrument Air	
Compressors (2)	ITT Pneumotive, model DTOGH715-T, double-ended, 4-cylinder; rating: 30 to 35 psi; s/n 180439P
Motors (2)	Century, frame M56Y, type SC; rating: 1.5 hp, 1,725/1,425 rpm, 230/460 V, 4.6/2.3 A, 3-phase; p/n 8-141003-01

Equipment Information (continued)	
Components	Characteristics
Heating and Ventilation Systems	
Air Handling Fan	McQuay, Seasonvent model LYF108CI, 2-speed; capacity: 4,040 cfm; s/n 3FF00191
Motor	U.S., frame 145T, type T; rating: 1.0/0.5 hp, 1,800/900 rpm, 460 V, 3-phase; ID no. 9222
Heater	Trane, model GPA801005A, type 135-0504-4A, gas heater; s/n 3C-17362
Pump Room Transfer Fan	New York Blower, shop no. 24435, type B, size 122; capacity: _____ cfm
Motor	Baldor, frame 49; rating: 0.33 hp, 1,725 rpm, 115 V, 1-phase; s/n W481
Wet Well Exhaust Fan	New York Blower, shop no. Z4435, type B, size 150; capacity: 2,260 cfm
Motor	Rating: 0.33 hp, 1,725 rpm, 115 V, 1-phase
Drainage System	
Sump Pump	_____
Odor Control System	
Pepcon System	_____
Control System	
PLC	_____
Bubblers (2)	_____
Metrotel II	_____
Miscellaneous	
Trolley Hoist	Yale, model KEL2-31P71/252, series KEL; capacity: 2 tons; s/n K107181D 2/75; motor rating: 1 hp, 1,700 rpm, 230/460 V, 3-phase
Chain Hoist	Yale, manually operated chain hoist (wet well); capacity: 0.5 ton
Explosive-Gas Monitor	Bacharach Instrument, model CD830P; s/n 7A03PC3

APPENDIX A
CATAD SERVICE FIXED-DATA SCREENS FOR
WEST DIVISION OFFSITE STATIONS

MENU	LEVEL	HELP	SERVICE	NOTES	TREND	RAIN
DUWAMISH PUMP STATION						
STATION ADDRESS		4545 E. MARGINAL WAY SO.				
CATAD CIRCUIT		2 FDDA 3313 SEGMENT B				
METROTREL CIRCUIT		4UGDA 5104				
CIRCUIT TROUBLE CALL		346-9900/622-4343				
WET WELL INVERT		88.25	LEAD PUMP ON		89.25	
HIGH LEVEL ALARM		98.33	LEAD PUMP OFF		89.85	
LOW LEVEL ALARM		89.00	FIRST FOLLOW ON		94.25	
DRY WEATHER LEVEL		90.50	FIRST FOLLOW OFF		92.58	
DRY WEATHER FLOW		22.0	SECOND FOLLOW ON		98.33	
STORAGE TIME			SECOND FOLLOW OFF		94.17	
OVERFLOW ELEVATION		99.00	ACT WET WELL LUL		91.788	
			ACT SETPOINT LUL		91.726	
EMERGENCY GENERATOR		REQUIRES 200 KW PORTABLE			LAST EDITED: MM/DD/YY	
SEATTLE CITY LIGHT		625-3000 / 386-4209				
NOTE: 1 - TO SAVE CHANGES, HIT F5 (SAVE) .						
L5771A						
INDEX	ALARM	CLEAR	PAGE	BACK	ALM SUM	RETURN
					COPY	EXE
					NOKEY FORNEY	01/29/93
					72 410	14:25:31

MENU	LEVEL	HELP	SERVICE	NOTES	TREND	RAIN
EAST MARGINAL PUMP STATION						
STATION ADDRESS		7319 E. MARGINAL WAY SO.				
CATAD CIRCUIT		2 FDDA 3315 SEGMENT D				
METROTREL CIRCUIT		4UGDA 5105 SEG H				
CIRCUIT TROUBLE CALL		346-9900/622-4343				
WET WELL INVERT		93.50	LEAD PUMP ON		95.1	
HIGH LEVEL ALARM		98.0	LEAD PUMP OFF		94.2	
CATAD LOCKOUT		93.5 LO 98.5 HI			96.0	
LOW LEVEL ALARM		94.50	FIRST FOLLOW OFF		95.0	
DRY WEATHER LEVEL		95.00	SECOND FOLLOW ON		98.7	
DRY WEATHER FLOW		6.0	SECOND FOLLOW OFF		97.2	
STORAGE TIME			ACT WET WELL LUL		95.214	
OVERFLOW ELEVATION		100.50	ACT SETPOINT LUL		95.214	
			LEVEL AT WHICH MODE 1 IS AT MIN. SPEED		94.0	
			LEVEL AT WHICH MODE 1 IS AT MAX. SPEED		95.5	
			LEVEL AT WHICH MODE 2 IS AT MIN. SPEED		95.2	
			LEVEL AT WHICH MODE 2 IS AT MAX. SPEED		98.0	
			LEVEL AT WHICH MODE 3 IS AT MIN. SPEED		97.2	
			LEVEL AT WHICH MODE 3 IS AT MAX. SPEED		99.0	
			PUMP MIN. SPEED		305	
			PUMP MAX. SPEED		440	
EMERGENCY GENERATOR		REQUIRES 90 KW PORTABLE			LAST EDITED: MM/DD/YY	
SEATTLE CITY LIGHT		625-3000 / 386-4209				
NOTE: 1 - TO SAVE CHANGES, HIT F5 (SAVE) .						
L5773A						
INDEX	ALARM	CLEAR	PAGE	BACK	ALM SUM	RETURN
					COPY	EXE
					NOKEY FORNEY	01/29/93
					58 568	14:22:19